

# APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04249

SHEET 1 OF 1

DWG NO. 647.9300

REV: NC

PREPARED BY J. SOTO

DATE: 11/14/2013

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: BRACKETS

APPROVED BY:

ENGR

*[Signature]*

MFG

*[Signature]*

QC

*[Signature]*

EFF.

NEXT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: REVISED NOTE 4

ECR:

13-037

## SHEET 1, ZONE A1 IS:

NOTES: UNLESS OTHERWISE SPECIFIED

IS

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.

2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR: BLACK;  
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J TYPE I, CLASS N.

3. DEBURR AND BREAK ALL SHARP EDGES.

4. IDENTIFY IAW MPP-120.

5. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9310 LH BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

6. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9311 SUPPORT BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

7. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9312 BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

8. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9313 BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

9. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9314 RETAINER BRACKET.SLDPRT, LAST MODIFIED 09-26-11.

10. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9315 RECEPTACLE BRACKET.SLDPRT, LAST MODIFIED 11-16-12.

11. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9316 CROSSBAR BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

12. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9317 RH BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

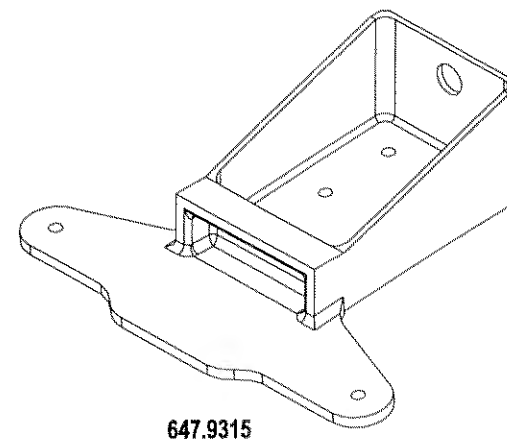
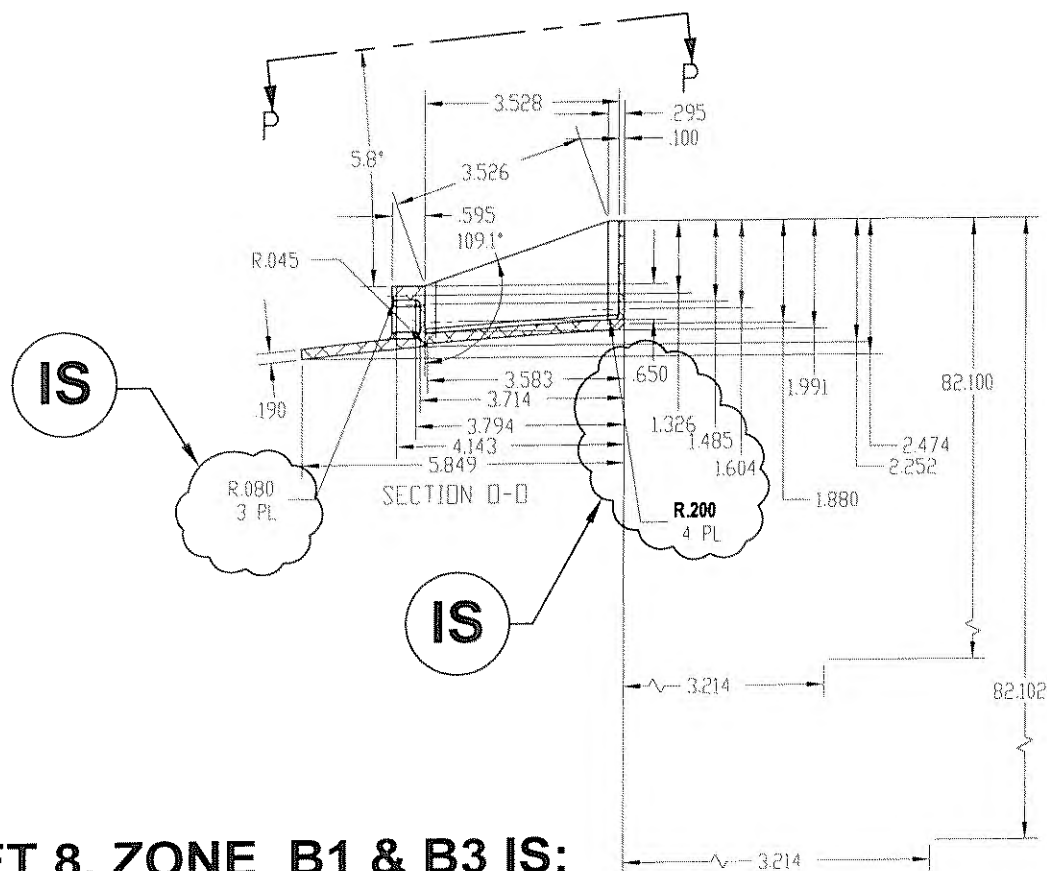
DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03706				SHEET 1 OF 2	
	DWG NO. 647.9300	REV: N/C	PREPARED BY B. PETERS	DATE: 11/16/12	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.	
	DWG TITLE: BRACKETS					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFFECT: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED RADII ON 647.9315.				EFFECT: D-12-012	

## SHEET 1, ZONE B4, NOTE 10 IS:

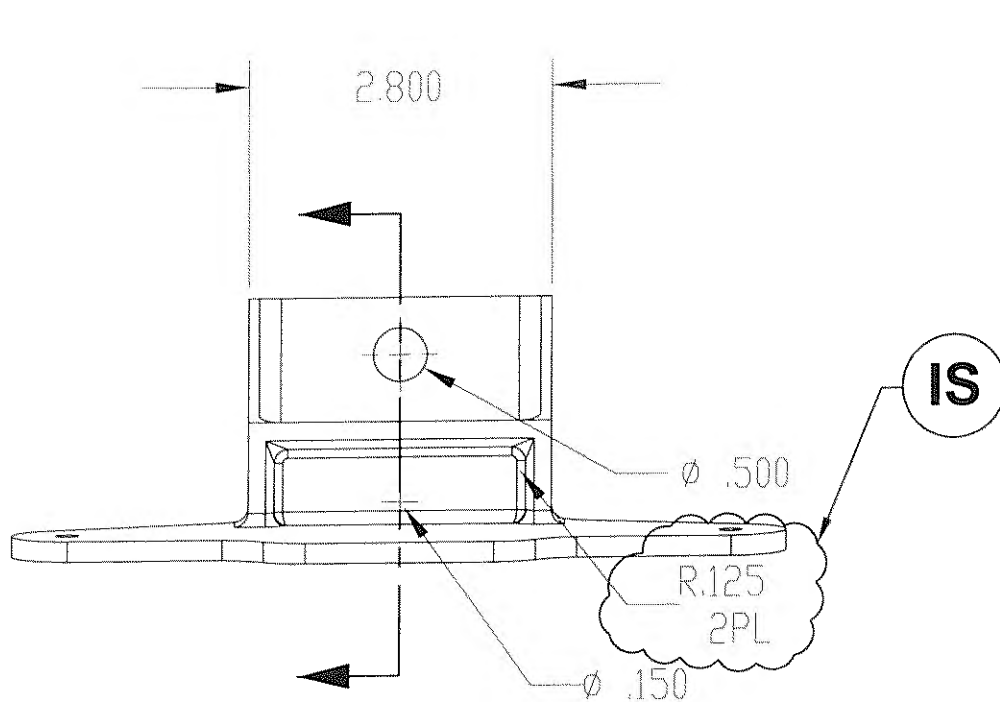
**10** PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9315 RECEPTACLE BRACKET.SLDPRT, LAST MODIFIED 11-16-12.



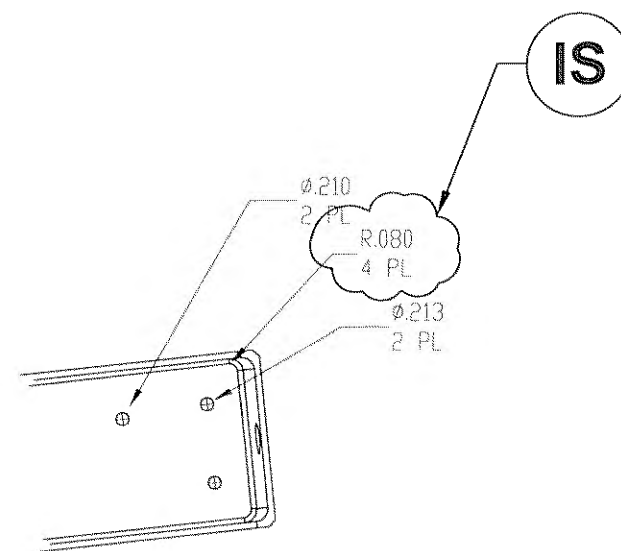
## SHEET 8, ZONE B1 & B3 IS:

## SHEET 8, ZONE A7 IS:

DOCUMENTS EFFECTED:	<input type="checkbox"/> RFMS <input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY	DER REVIEW REQUIRED
		<input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO



**SHEET 8, ZONE B6 IS:**



SECTION P-P

**SHEET 8, ZONE B8 IS:**

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
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APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03209				SHEET 1 OF 2	
	DWG NO. 647.9300	REV: N/C	PREPARED BY A. QUAN	DATE: 11/09/11	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.	
	DWG TITLE: BRACKET					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER AND STOCK		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED HOLE LOCATIONS ON 647.9314, ADDED HOLE 647.9315					

**SHEET 1, ZONE B3:**

NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.

2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR: BLACK;  
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J TYPE I, CLASS N.

3. DEBURR AND BREAK ALL SHARP EDGES

4. IDENTIFY IAW MPP-120 LASER ENGRAVE CENTURY GOTHIC, 12 POINT P/N AND REVISION

5. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9310 LH BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

6. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9311 SUPPORT BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

7. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9312 BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

8. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9313 BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

9. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9314 RETAINER BRACKET.SLDPRT, LAST MODIFIED 09-26-11.

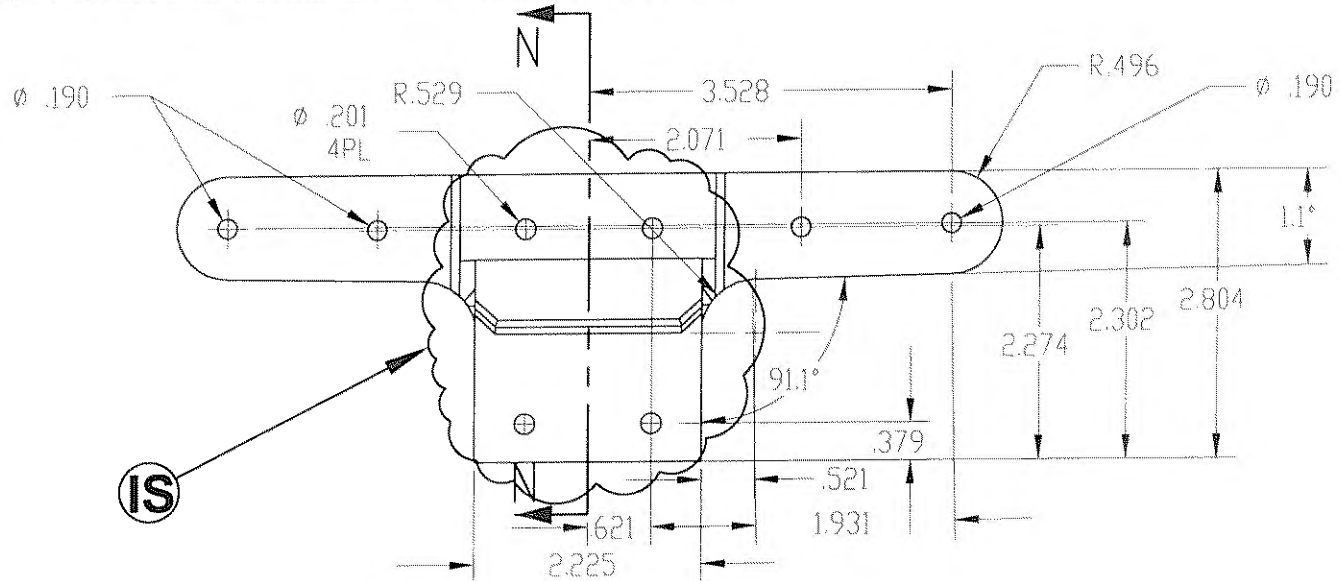
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11. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9316 CANSOAR BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

12. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9317 RH BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

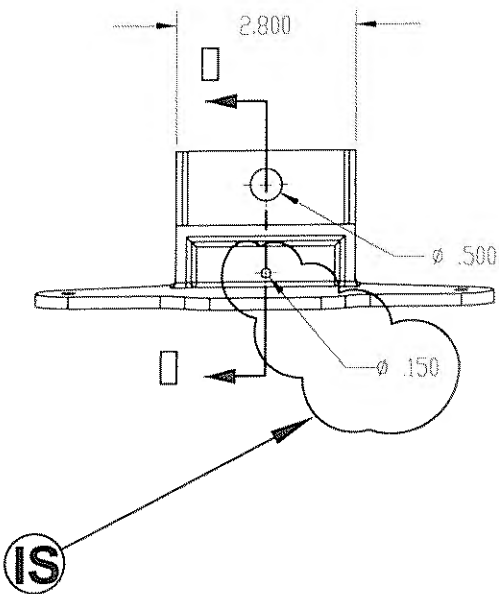
IS

**SHEET 7, ZONE B4:**



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

SHEET 8, ZONE B5:



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE RELEASE, PRT		
N/C	INITIAL RELEASE	06-30-10	P. BRAVO

NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR: BLACK; PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J TYPE I, CLASS N.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120. LASER ENGRAVE CENTURY GOTHIC, 12 POINT P/N AND REVISION.
5. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9310 LH BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
6. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9311 SUPPORT BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
7. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9312 BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
8. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9313 BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
9. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9314 RETAINER BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
10. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9315 RECEPTACLE BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
11. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9316 CROSSBAR BRACKET.SLDPRT, LAST MODIFIED 06-22-10.
12. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 647.9317 RH BRACKET.SLDPRT, LAST MODIFIED 06-22-10.

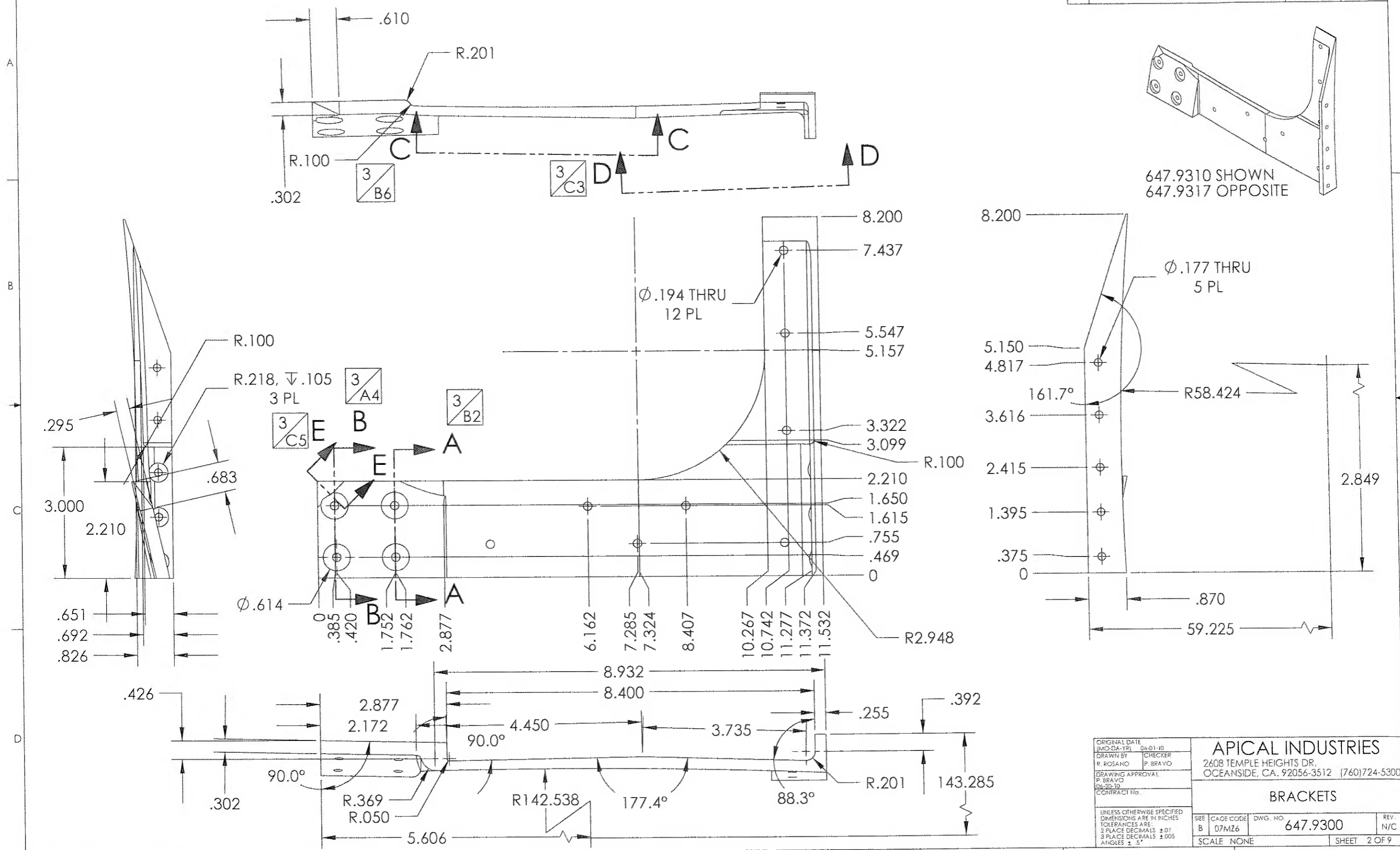
UNINCORPORATED ECN(s)

03209, 03706, 04249

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		647.9316	CROSSBAR BRACKET	<div>1</div>	<div>2</div> <div>11</div>
		647.9315	RECEPTACLE BRACKET	<div>1</div>	<div>2</div> <div>10</div>
		647.9314	RETAINER BRACKET	<div>1</div>	<div>2</div> <div>9</div>
		647.9313	BRACKET	<div>1</div>	<div>2</div> <div>8</div>
		647.9312	BRACKET	<div>1</div>	<div>2</div> <div>7</div>
		647.9311	SUPPORT BRACKET	<div>1</div>	<div>2</div> <div>6</div>
		647.9310	LH BRACKET	<div>1</div>	<div>2</div> <div>5</div>
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY			PARTS LIST		
NEXT ASSY (S)		ORIGINAL DATE (MM-DD-YY) 06-01-10		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
647.8900		DRAWN BY R. ROSANO			
		CHECKER P. BRAVO			
		DRAWING APPROVAL P. BRAVO 06-30-10			
		CONTRACT NO.		BRACKETS	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°		SIZE B	CAGE CODE 07MZ6
				DWG. NO. 647.9300	REV. N/C
				SCALE NONE	SHEET 1 OF 9

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

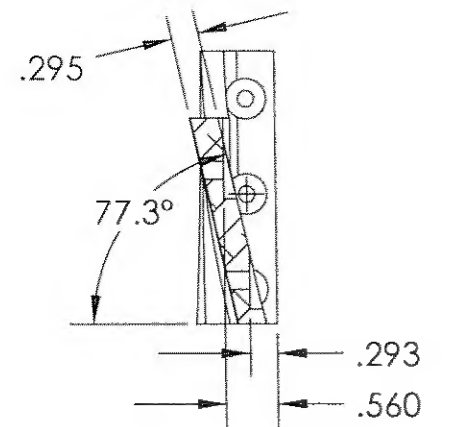


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DRAWN BY R. ROSANO	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 04-30-10		BRACKETS	
CONTRACT NO.		SHEET 2 OF 9	REV. N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SCALE NONE	DWG. NO. 647.9300

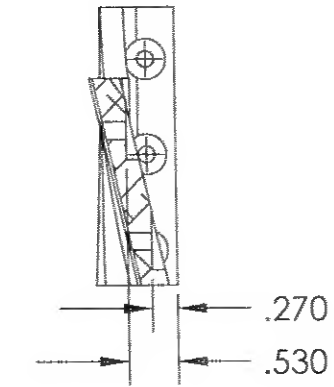
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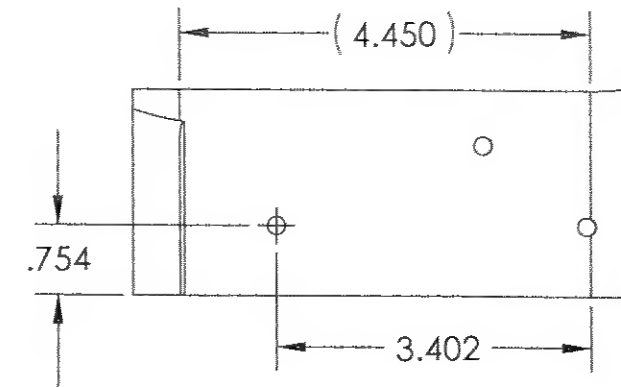
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



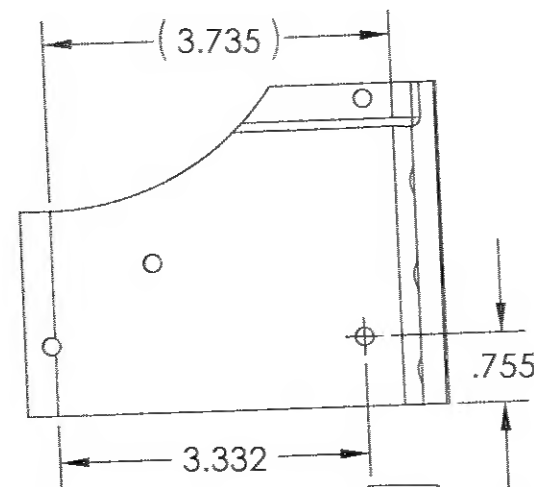
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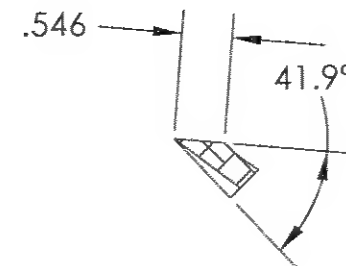
SECTION B-B  $\frac{2}{C2}$



SECTION C-C  $\frac{2}{A3}$



SECTION D-D  $\frac{2}{A4}$



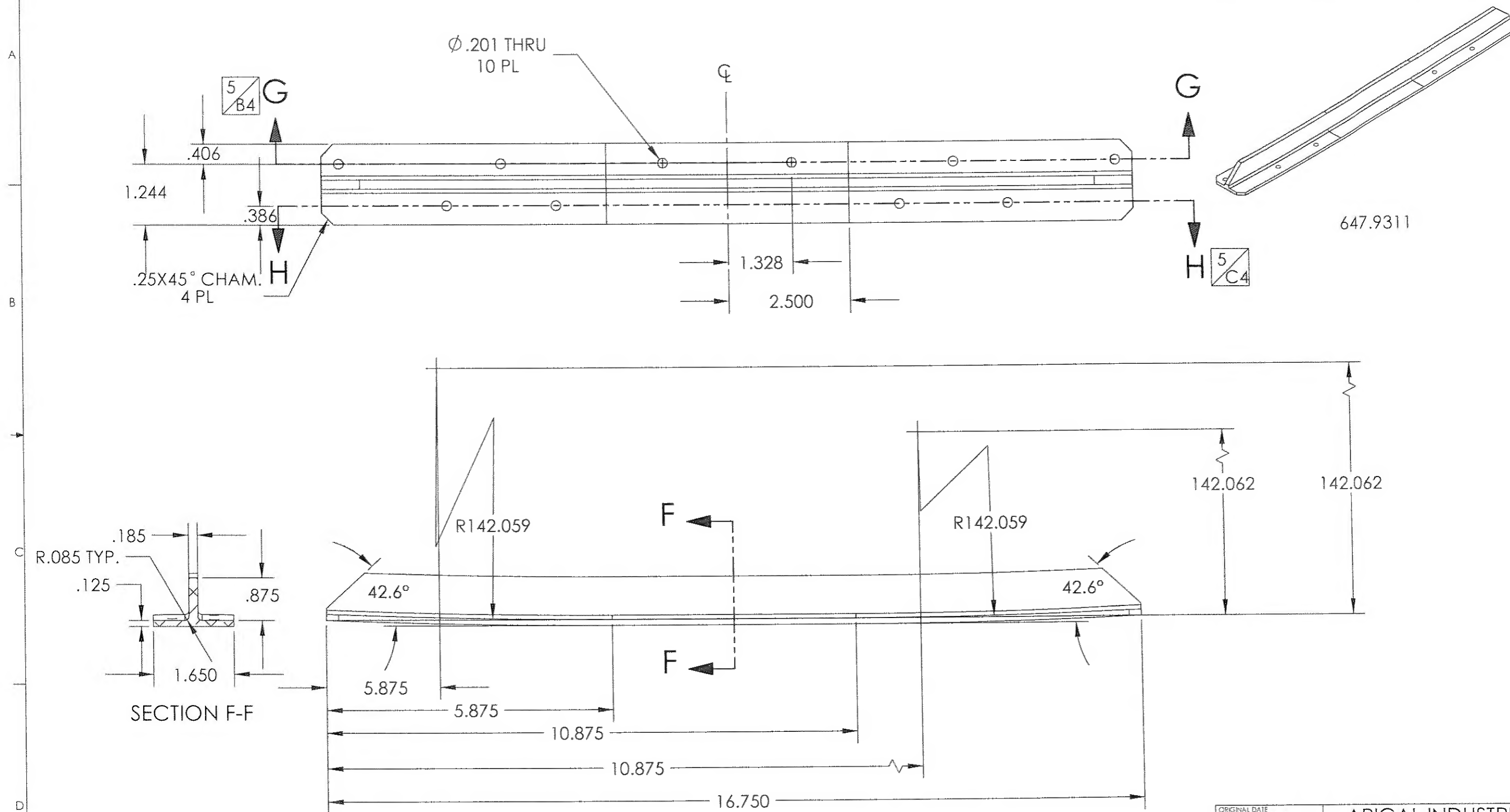
SECTION E-E  $\frac{2}{C2}$

ORIGINAL DATE (MO-DA-YR) 06-01-10		APICAL INDUSTRIES	
DRAWN BY R. ROSANO		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKER P. BRAVO		BRACKETS	
DRAWING APPROVAL P. BRAVO 06-30-10		SCALE NONE	
CONTRACT No.		SHEET 3 OF 9	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SSE B	REV. N/C
		CAGE CODE 07MZ6	DWG. NO. 647.9300



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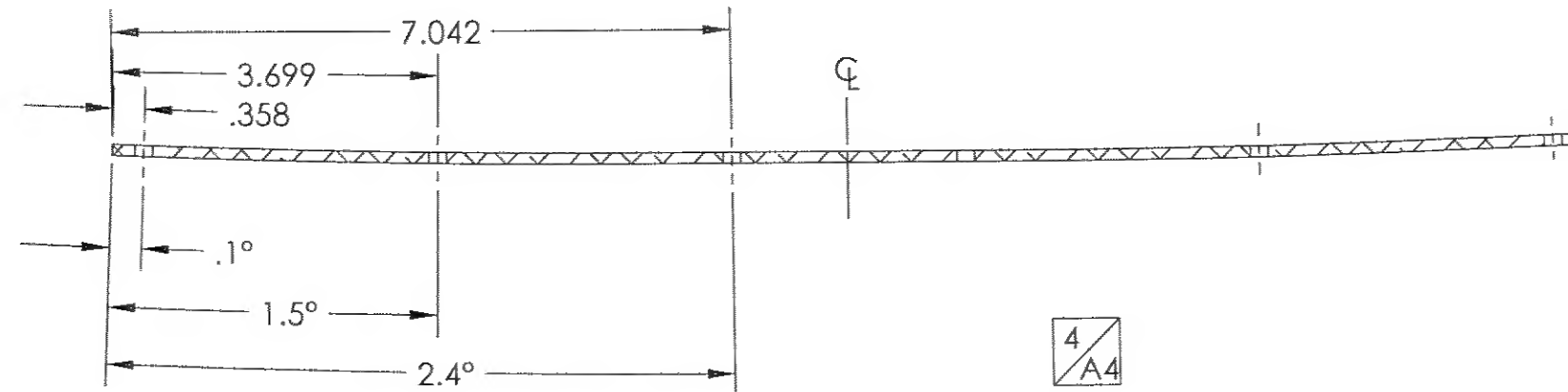
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



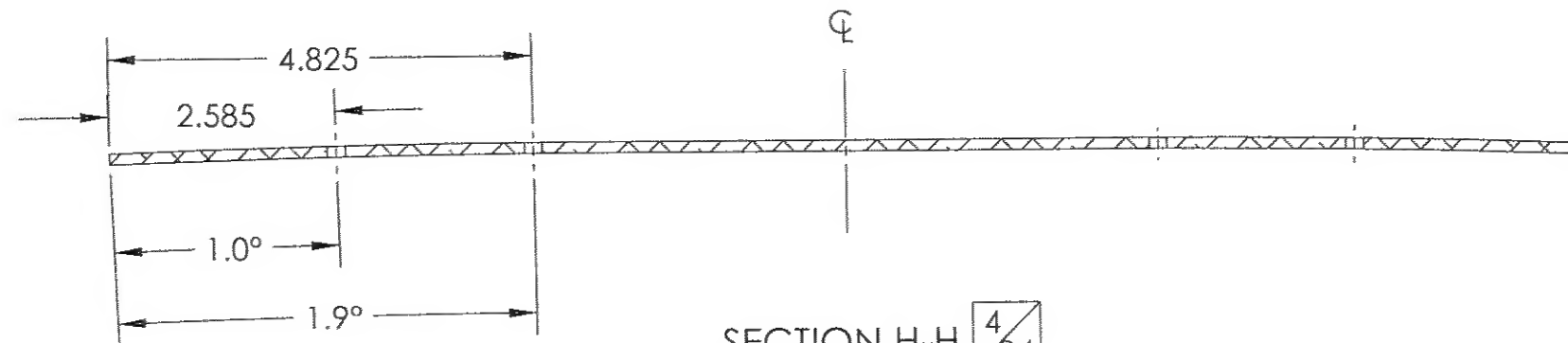
ORIGINAL DATE (MO-DA-YR) 05-01-10		APICAL INDUSTRIES	
DRAWN BY R. ROSANO	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 04-30-10		BRACKETS	
CONTRACT NO.		SIZE B	REV. N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .03 3 PLACE DECIMALS ± .010 ANGLES ± .5°		CAGE CODE 07MZ6	DWG NO 647.9300
SCALE NONE		SHEET 4 OF 9	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



SECTION G-G

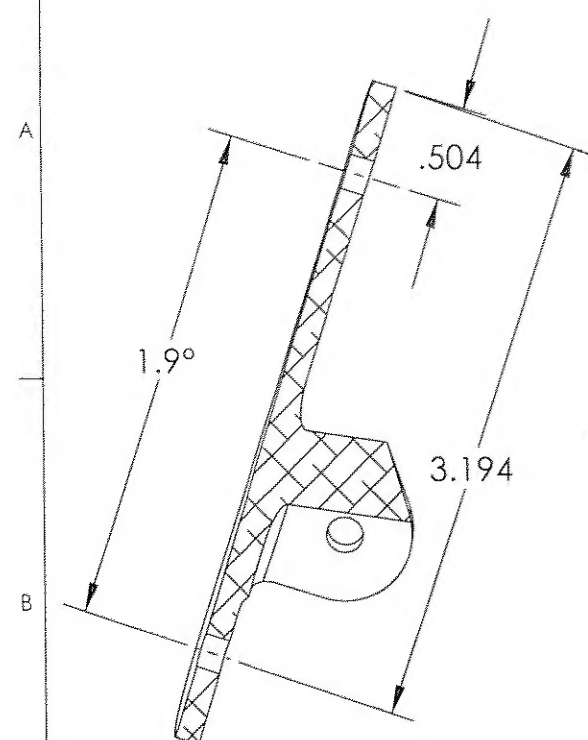


SECTION H-H

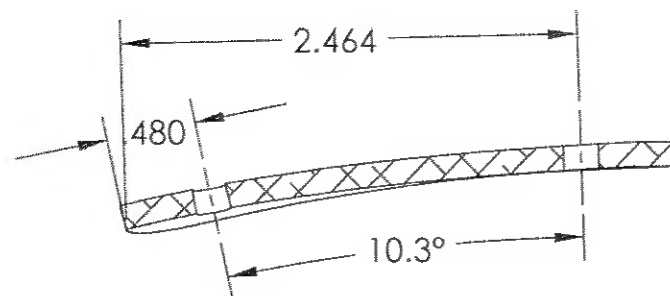
ORIGINAL DATE (MO-DA-YR) 06-01-10		APICAL INDUSTRIES	
DRAWN BY R. ROSANO	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 06-30-10		BRACKETS	
CONTRACT NO.		SIZE B	REV. N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		CAGE CODE 07MZ6	DWG. NO. 647.9300
		SCALE NONE	SHEET 5 OF 9

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

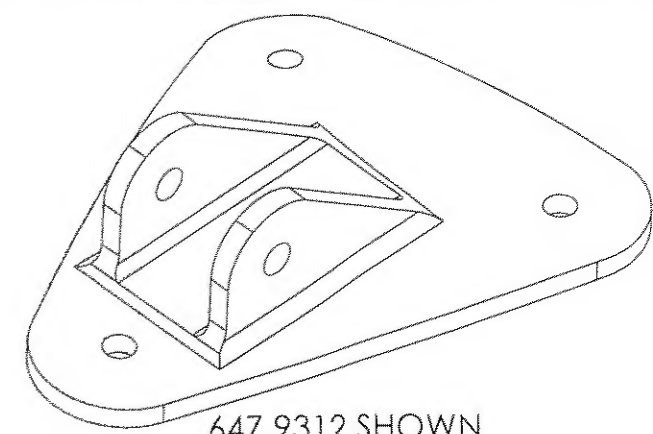
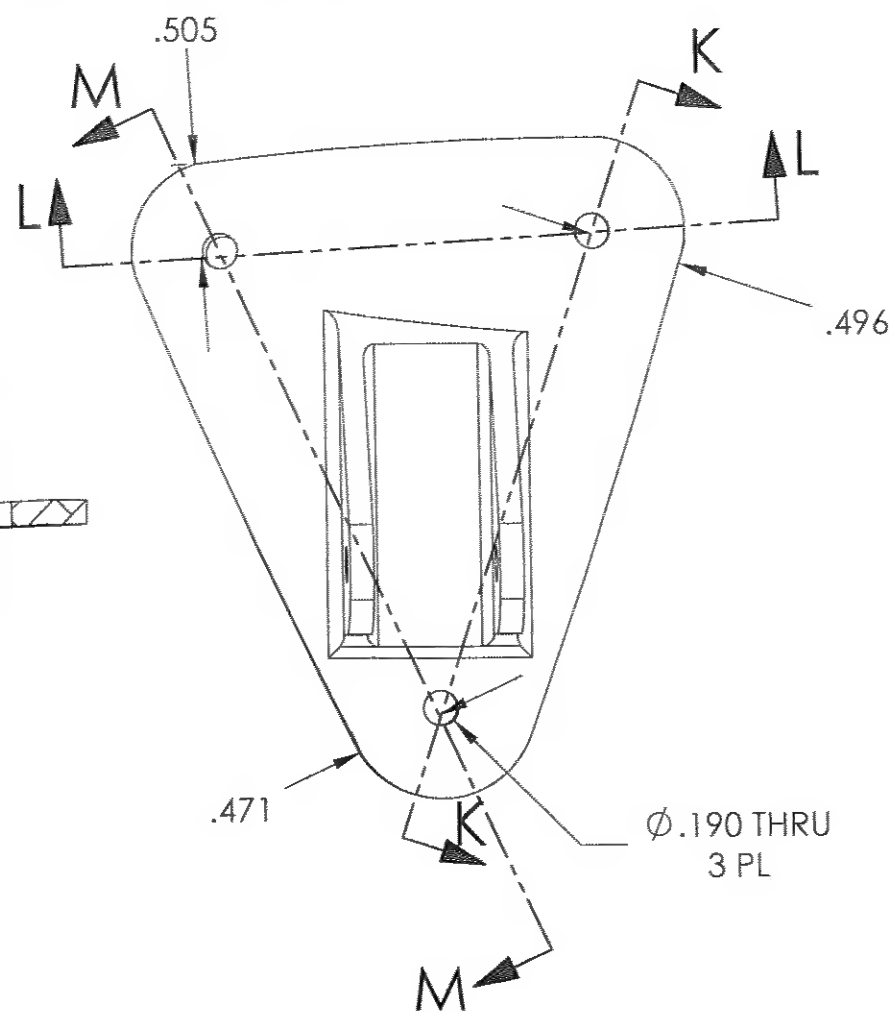
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



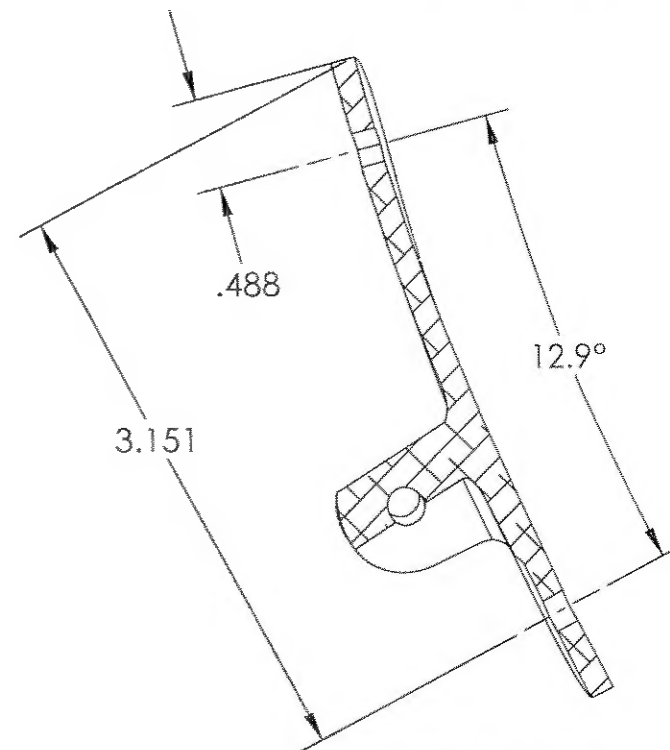
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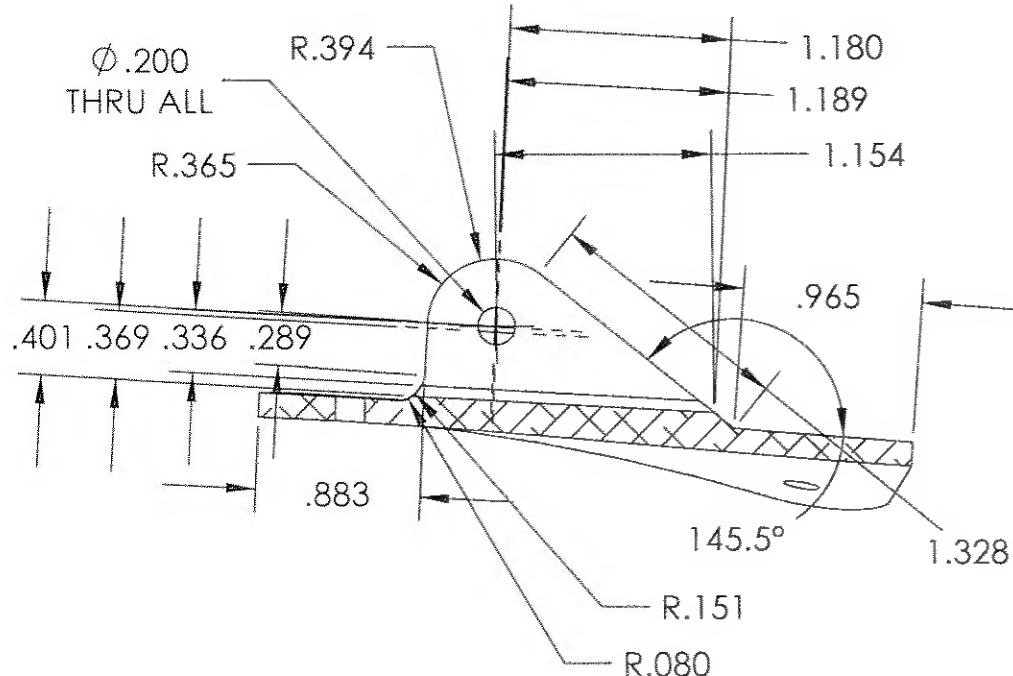
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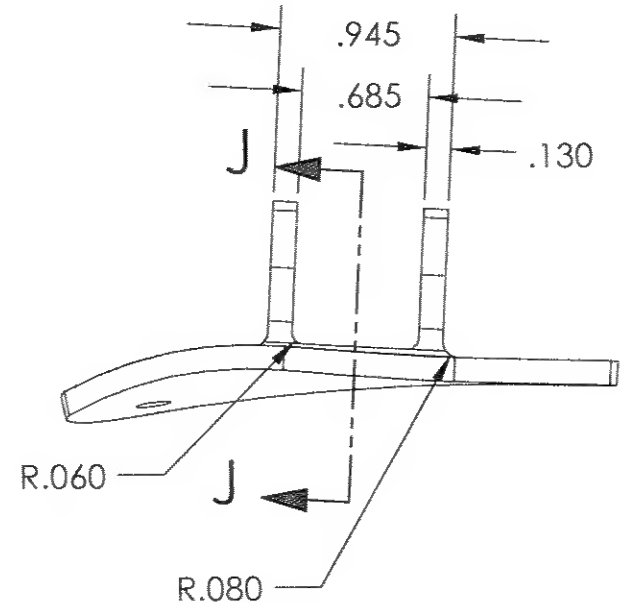
647.9312 SHOWN  
647.9313 OPPOSITE



SECTION M-M



SECTION J-J



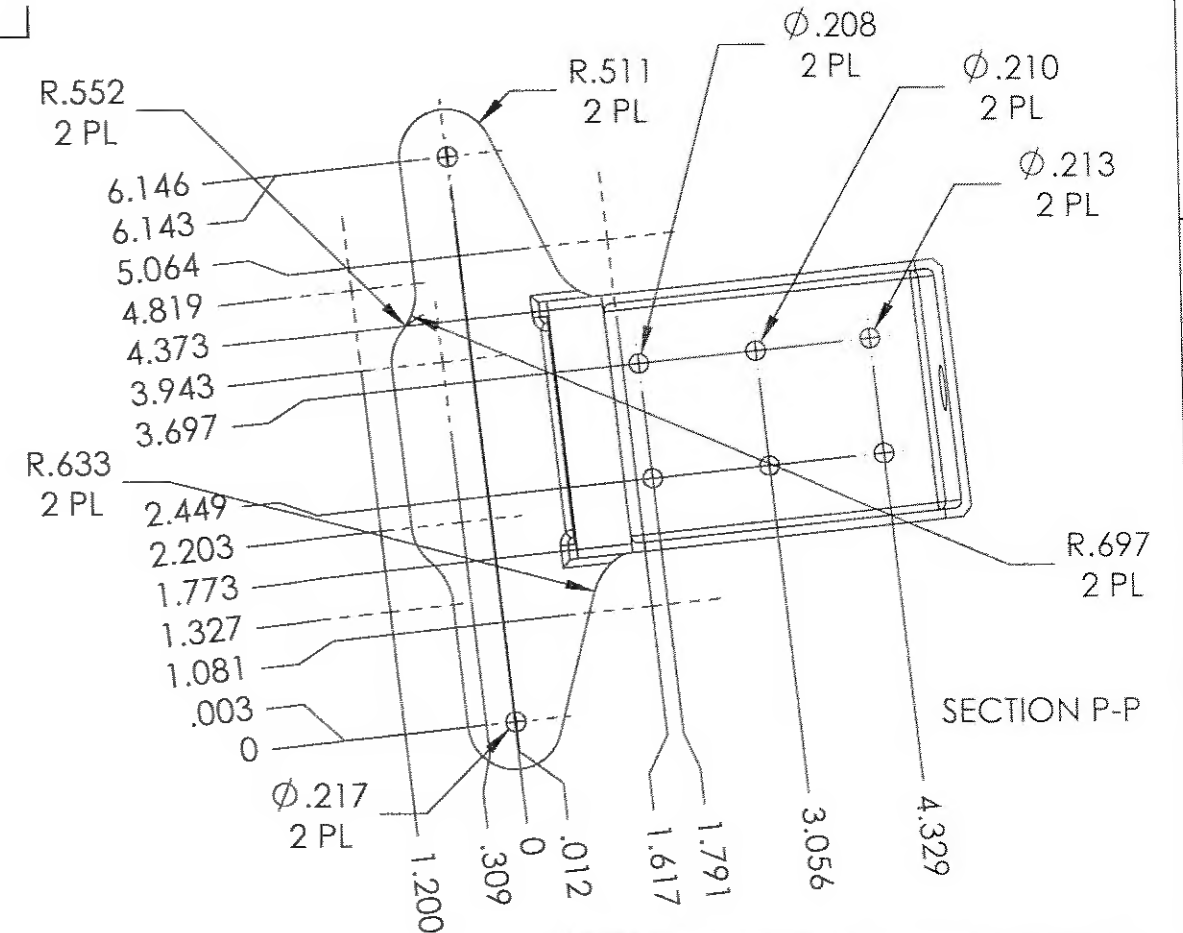
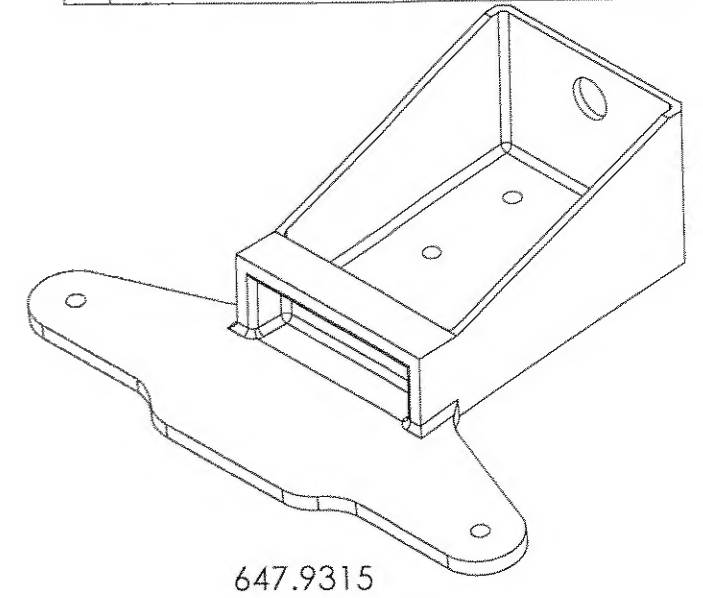
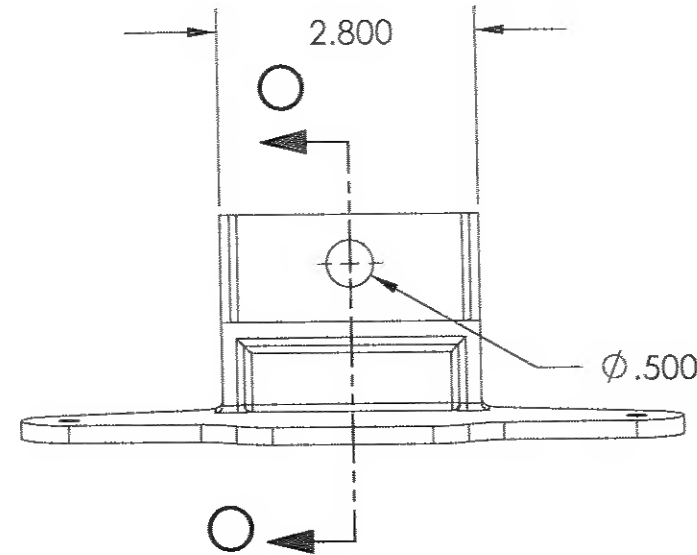
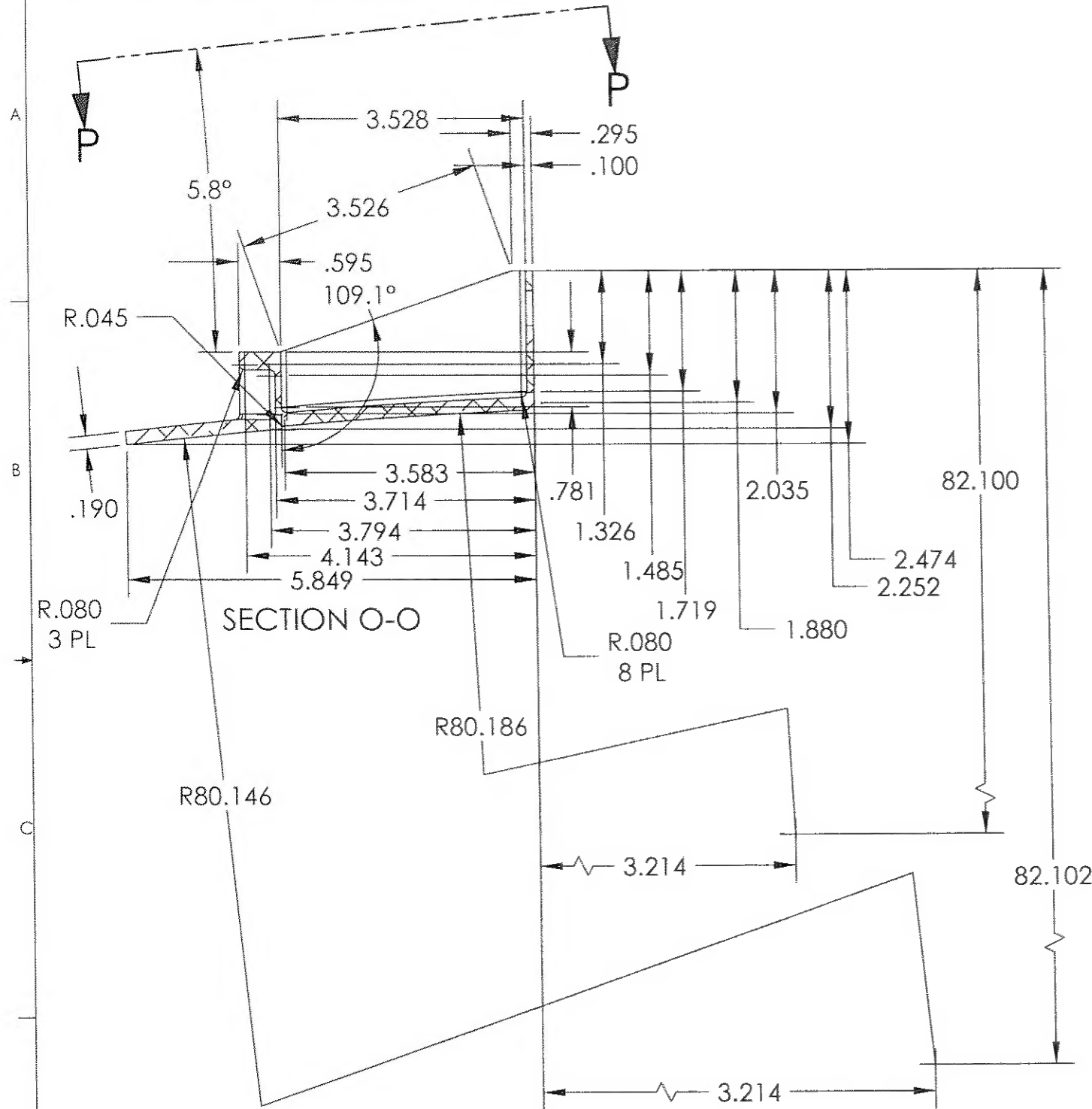
PARTS LIST

ORIGINAL DATE (MO-DA-YR) 06-01-10		APICAL INDUSTRIES	
DRAWN BY R. ROSANO	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 06-30-10		BRACKETS	
CONTRACT NO.		SIZE B	REV. N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°		DWG. NO. 647.9300	SCALE NONE
		SHEET 6 OF 9	

ORIGINAL DATE 11-02-01-10	APICAL INDUSTRIES		
DRAWN BY R. ROSANO	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO	BRACKETS		
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS $\pm$ 0.03 3 PLACE DECIMALS $\pm$ 0.01 ANGLES	SIZE B	CAGE CODE 07M26	DWG. NO. 647.9300
	SCALE NONE		REV. N/C
	SHEET		7 OF 9

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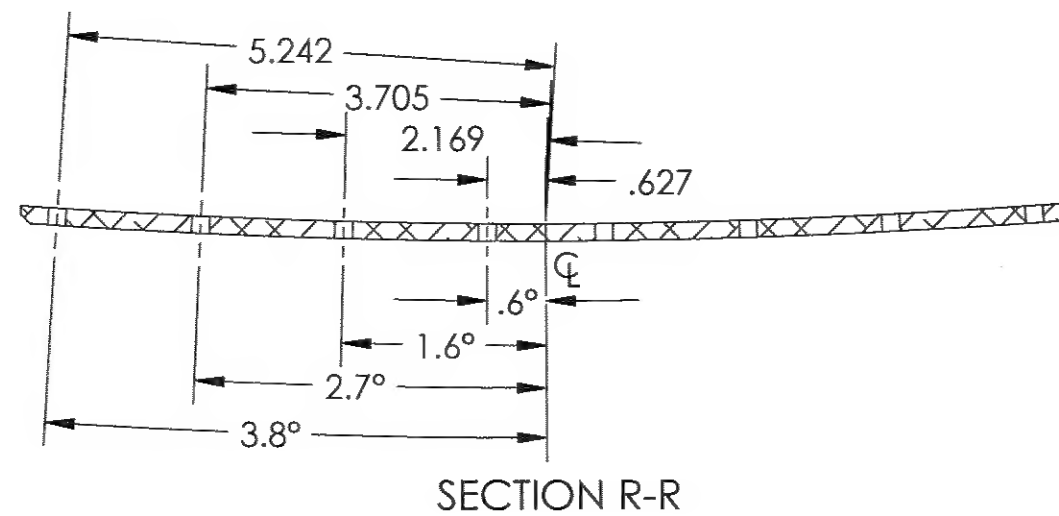
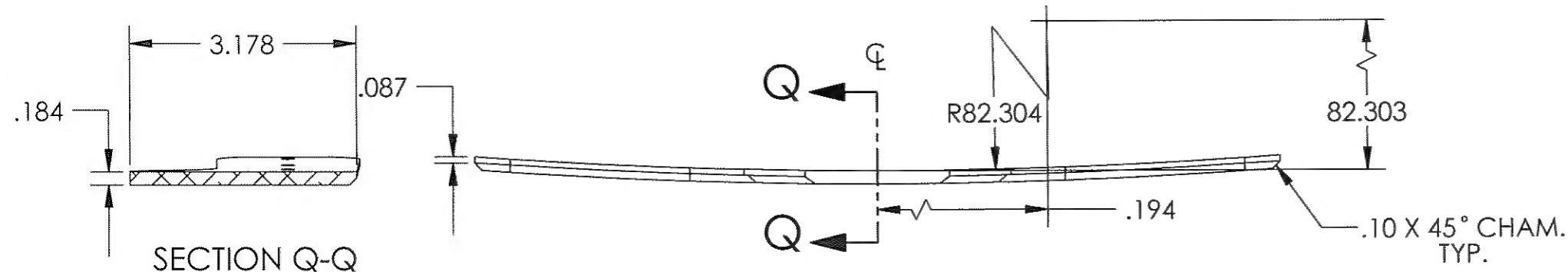
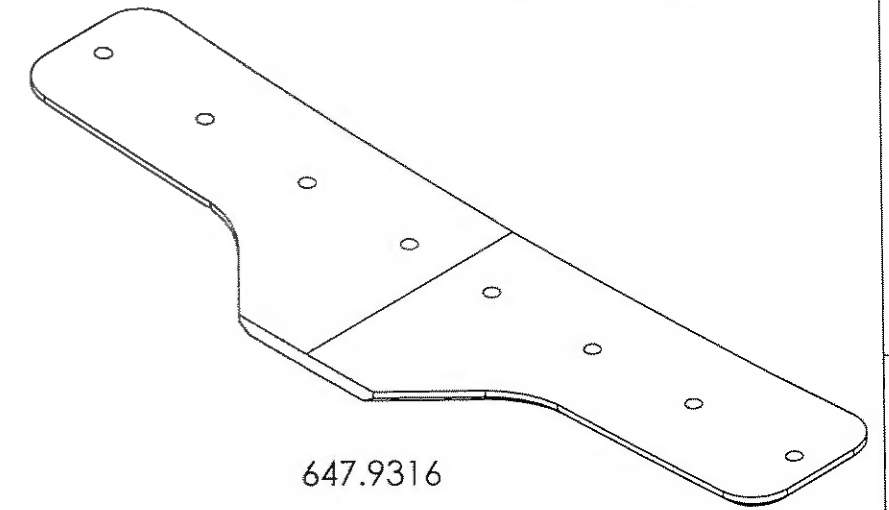
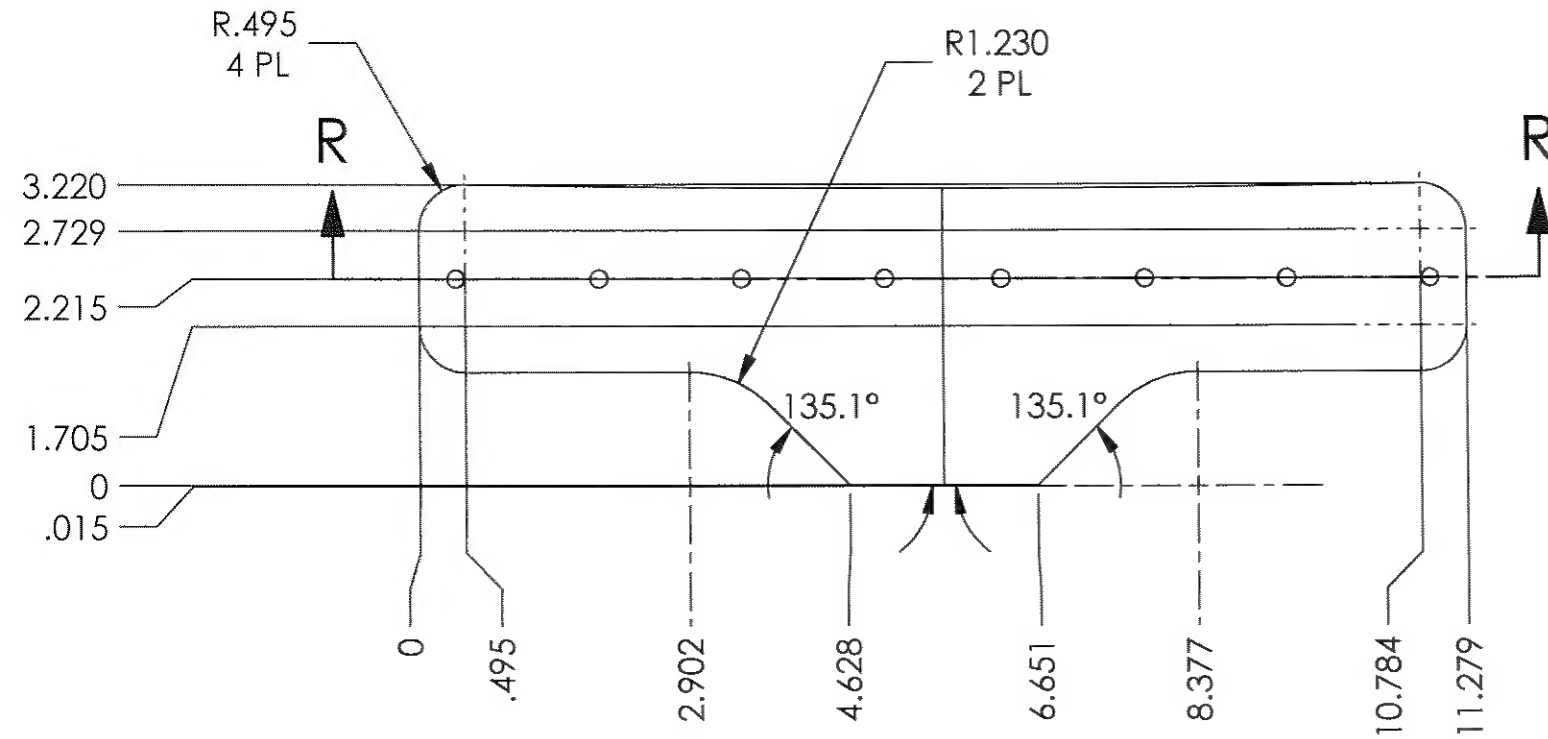
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE (MO-DA-YR) 06-01-10		APICAL INDUSTRIES	
DRAWN BY R. ROSANO	CHECKER P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 06-30-10		BRACKETS	
CONTRACT NO.		SIZE B	REV N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°		CAGE CODE 07MZ6	DWG. NO. 647.9300
SCALE NONE		SHEET 8 OF 9	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE (MO-DA-YR) 06-01-10		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY R. ROSANO	CHECKER P. BRAVO		
DRAWING APPROVAL P. BRAVO 06-30-10		BRACKETS	
CONTRACT No.		SCALE NONE	SHEET 9 OF 9
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°		SZE   CAGE CODE   DWG. NO. B   07MZ6   647.9300	REV. N/C